

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claims 1-32 (Canceled)

Claim 33 (Previously Presented): A method of intermixing vapor and liquid streams in a mass transfer column having a plurality of vapor-liquid contact trays supported in the open internal region, at least one tray having a plurality of radially extending curved blades formed in the tray deck and presenting narrowing vapor flow channels through the tray, at least one can having a perimeter wall, at least one downcomer interposed within the can and a plurality of deflector blades positioned above the tray deck, the method comprising:

- (a) flowing a liquid stream across the tray deck of one of the trays toward at least one opening in the tray deck;
- (b) directing at least part of the liquid stream into an inlet of the downcomer;
- (c) discharging substantially all of the part of liquid stream from the downcomer and into the can of the underlying tray deck;
- (d) passing vapor stream upwardly through said narrowing flow channels; and
- (e) increasing the velocity of said vapor stream as it passes through said flow channels and inducing a swirling movement in the vapor, wherein the swirling vapor causes the liquid in the can to be thrown against and lifted upwardly along the inner surface of the perimeter wall of the can.

Claims 34-38 (Canceled)

Claim 39 (Previously Presented): A vapor-liquid contact tray comprising:
a tray deck having at least one opening for removing liquid from an upper surface of the tray
deck and a plurality of radially extending curved blades formed in the tray deck, said
blades presenting narrowing vapor flow channels through the tray;
at least one can extending upwardly from the tray deck and formed by a perimeter wall;
at least one downcomer interposed within said can and providing a passageway for liquid, said
downcomer having an upper inlet for receiving liquid and a lower outlet spaced above
the tray deck for feeding liquid into the can and onto the tray deck; and
a plurality of deflector blades positioned above the tray deck within said can.

Claim 40 (Previously Presented): The contact tray of claim 39, wherein said blades comprise a
plurality of stacked plates.

Claim 41 (Previously Presented): The contact tray of claim 40, wherein said blades are
superimposed in contact with the blades of an adjacent plate.

Claim 42 (New): A mass transfer column comprising an external shell defining an interior
region open to the flow of vapor and liquid streams and a plurality of vapor-liquid contact trays
supported in the open internal region, at least one of the vapor-liquid contact trays comprising:

a tray deck having at least one opening for removing liquid from an upper surface of the tray
deck and a plurality of radially extending curved blades formed in the tray deck, said
blades presenting narrowing vapor flow channels through the tray;
at least one can extending upwardly from the tray deck and formed by a perimeter wall;

at least one downcomer interposed within said can and providing a passageway for liquid, said downcomer having an upper inlet for receiving liquid and a lower outlet spaced above the tray deck for feeding liquid into the can and onto the tray deck; and a plurality of deflector blades positioned above the tray deck within said can.

Claim 43 (New): A mass transfer column as set forth in claim 42, wherein said blades comprise a plurality of stacked plates.

Claim 44 (New): A mass transfer column as set forth in claim 43, wherein said blades are superimposed in contact with the blades of an adjacent plate.